

Job description and selection criteria

Job title	Postdoctoral Research Assistants in Aerosol, Cloud & Precipitation Interactions
Division	Mathematical, Physical and Life Sciences Division
Department	Department of Physics
Location	Atmospheric, Oceanic and Planetary Physics
Grade and salary	Grade 7: £31,604 – £38,833 per annum
Hours	Full time- (37.5 hours per week)
Contract type	Fixed-term for 36 months (project funded)
Reporting to	Philip Stier, Professor of Atmospheric Physics
Vacancy reference	132692
Additional information	Closing date – midday (UK time) on 22 January 2018

Research topic	Novel approaches to aerosol, cloud & precipitation interactions
Principal Investigator / supervisor	Prof Philip Stier
Project team	Climate Processes Group
Project web site	https://www2.physics.ox.ac.uk/research/climate-processes
Funding partner	The funds supporting these positions research project are provided by the European Research Council project <i>constRaining the EffeCts of Aerosols on Precipitation (RECAP)</i> .
Recent publications	https://www2.physics.ox.ac.uk/research/climate-processes/publications



The role

We are looking for 2 outstanding researchers to join the dynamic Climate Processes Group (<http://www.physics.ox.ac.uk/research/climate-processes>) within the sub-Department of Atmospheric, Oceanic and Planetary Physics (AOPP). The posts are available for a fixed-term period of three years.

These positions, part of the new European Research Council project *constRaining the EffeCts of Aerosols on Precipitation (RECAP)*, will be at the forefront of developing novel ideas and tools for the assessments of aerosol, cloud and precipitation interactions. The first post will focus on larger scales, constraining aerosol-precipitation interactions top-down, utilising idealised and realistic global scale modelling in combination with theory. The second post will address aerosol-precipitation interactions bottom-up, employing detailed high-resolution CRM/LES modelling of aerosol and cloud processes from local to regional scales.

Successful applicants will work closely with national and international collaborators and are expected to develop innovative modelling approaches. The results should be presented at national and international meetings as well as published in high-impact publications.

Responsibilities

- The development of original research and analysis strategies
- The presentation of results at national and international meetings
- Publication of results in high-impact peer-reviewed journals
- Use and maintenance of complex atmospheric models and development of model components
- Contribution to the intellectual life of a dynamic research group, including meetings and collaborations
- The possibility to co-advise a doctoral student and other teaching opportunities. This may include small group teaching and tutoring of undergraduates and graduate students.

Selection criteria

Researchers applying for these posts should have or be close to obtaining a doctorate in atmospheric physics or a related quantitative field and a strong background in atmospheric modelling. Additional experience with either large-scale to meso-scale atmospheric dynamics / modelling or with aerosol and cloud microphysics / cloud resolving / LES modelling would be of benefit.

Essential

- Good first degree
- Doctorate (or close to obtaining) in atmospheric physics or related field
- Excellent understanding of atmospheric physics
- Strong background in atmospheric modelling
- Expertise with the analysis, use and development of complex atmospheric models (GCM, CRM or/and LES)
- Demonstrated drive and ability to perform novel research of international standing
- The ability to work collaboratively, yet independently, as part of a team
- Strong computing skills, including the knowledge of UNIX/Linux, Fortran, Python, or other high-level languages

Desirable

- Excellent understanding of cloud or aerosol physics and atmospheric dynamics
- Experience constraining models by observations
- Experience in multi-scale modelling
- Additional experience in atmospheric dynamics, small scale processes or the use of remote sensing and in-situ observations of aerosol and cloud parameters

About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, and in providing all of our staff with a welcoming and inclusive workplace that supports everyone to develop and do their best work. Recognising that diversity is a great strength, and vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities. Income from external research contracts in 2014/15 exceeded £522.9m and ranked first in the UK for university spin-outs, with more than 130 spin-off companies created to date. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information please visit www.ox.ac.uk/about/organisation

Department of Physics

Oxford Physics is one of the largest and most eminent departments in Europe – pursuing forefront research alongside training the next generation of leaders in Physics.

With an academic staff of almost one hundred our activities range from fundamental particles to the furthest reaches of the universe to manipulating matter on an atomic scale. Oxford physicists are probing new ways to harness solar energy, modelling the Earth's atmosphere to predict the future climate, exploring computation on the quantum scale and executing calculations that reveal the fundamental structure of space and time.

For more information please visit: <http://www2.physics.ox.ac.uk/>

Atmospheric, Oceanic & Planetary Physics (AOPP) Sub-department

The post-holders will be based in the AOPP sub-department, which is one of the six sub-departments that together make up the Department of Physics; these are Astrophysics, Atomic and Laser Physics, Atmospheric, Oceanic and Planetary Physics, Condensed Matter Physics, Particle Physics and Theoretical Physics, with a seventh function (Central Physics) providing administrative and technical support to these sub-departments. Members of all sub-departments take part in research, teaching and matters such as examinations, discussion of syllabi, lectures and liaison with undergraduates and postgraduate students.

Athena Swan Charter

The Department of Physics holds a silver Athena Swan award to recognise advancement of gender equality: representation, progression and success for all.

Mathematical, Physical & Life Sciences Division

The Mathematical, Physical and Life Sciences (MPLS) Division is one of the four academic divisions of the University of Oxford.

The MPLS Division's 10 departments and 3 interdisciplinary units span the full spectrum of the mathematical, computational, physical, engineering and life sciences, and undertake both fundamental research and cutting-edge applied work. Our research addresses major societal and technological challenges and is increasingly focused on key interdisciplinary issues. We collaborate closely with colleagues in Oxford across the medical sciences, social sciences and humanities, and with other universities, research organisations and industrial partners across the globe in pursuit of innovative research geared to address critical and fundamental scientific questions.

For more information please visit: <http://www.mpls.ox.ac.uk/>

How to apply

If you would like to apply, click on the **Apply Now** button on the 'Job Details' page and follow the on-screen instructions to register as a new user or log-in if you have applied previously. Please provide details of two referees and indicate whether we can contact them now.

You will also be asked to upload a CV and statement of research interests. Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description. Please upload all documents **as PDF files** with your name and the document type in the filename.

All applications must be received by **midday** on the closing date stated in the online advertisement.

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing departments.

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments)

Should you experience any difficulties using the online application system, please email recruitment.support@admin.ox.ac.uk. Further help and support is available from www.ox.ac.uk/about_the_university/jobs/support/. To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will be notified of the progress of your application by automatic emails from our e-recruitment system. **Please check your spam/junk mail** regularly to ensure that you receive all emails.

Important information for candidates

Pre-employment screening

Please note that the appointment of the successful candidate will be subject to standard pre-employment screening, as applicable to the post. This will include right-to-work, proof of identity and references. We advise all applicants to read the candidate notes on the University's pre-employment screening procedures, found at:

www.ox.ac.uk/about/jobs/preemploymentscreening/.

The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. From 1 October 2017, the University has adopted an EJRA of 30 September before the 69th birthday for all academic and academic-related staff in posts at grade 8 and above. The justification for this is explained at:

www.admin.ox.ac.uk/personnel/end/retirement/revisedejra/revaim/.

For **existing** employees, any employment beyond the retirement age is subject to approval through the procedures: www.admin.ox.ac.uk/personnel/end/retirement/revisedejra/revproc/

From 1 October 2017, there is no normal or fixed age at which staff in posts at **grades 1–7** have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equality of Opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Benefits of working at the University

Training and Development

A range of training and development opportunities are available at the University. Further details can be found at www.ox.ac.uk/staff/working_at_oxford/training_development/index.html.

For research staff only: Support for Research Staff

There is a particularly wide range of support for career development for research staff. Please visit: www.ox.ac.uk/research/support-researchers to find out more.

Pensions

The University offers generous occupational pension schemes for eligible staff members. Further details can be found at www.admin.ox.ac.uk/finance/epp/pensions/pensionspolicy/.

Information for international staff (or those relocating from another part of the UK)

A wealth of information is available on the University's International Staff website for staff who are relocating to Oxford from abroad, at www.admin.ox.ac.uk/personnel/staffinfo/international/.

The University of Oxford Newcomers' Club

The Newcomers' Club is aimed at helping partners of newly-arrived visiting scholars, graduate students and academic members of the University to settle in and to meet people in Oxford.

Transport schemes

The University offers a range of travel schemes and public transport travel discounts to staff. Full details are available at www.admin.ox.ac.uk/estates/ourservices/travel/.

University Club and University Sports Facilities

The University Club provides social, sporting and hospitality facilities. It incorporates a Club bar, a cafe and sporting facilities, including a gym. See www.club.ox.ac.uk for all further details.

University staff can use the University Sports Centre at discounted rates, and have the chance to join sports clubs. Please visit www.sport.ox.ac.uk/oxford-university-sports-facilities.

Childcare and Childcare Vouchers

The University offers quality childcare provision services at affordable prices to its employees. For full details about the services offered, please visit www.admin.ox.ac.uk/childcare/. **NB: Due to the high demand for the University's nursery places there is a long waiting list.**

The University also offers nursery fee payment schemes to eligible staff as an opportunity to save tax and national insurance on childcare costs. Please visit www.admin.ox.ac.uk/childcare.

Disabled staff

The University is committed to supporting members of staff with a disability or long-term health condition and has a dedicated Staff Disability Advisor. Please visit www.admin.ox.ac.uk/eop/disab/staff for further details.

BUPA - Eduhealth

Bupa Eduhealth Essentials private medical insurance offers special rates for University of Oxford staff and their families www.eduhealth.co.uk/mini-site/.

All other benefits

For other benefits, such as free entry to colleges, the Botanic Gardens and staff discounts offered by third party companies, please see www.admin.ox.ac.uk/personnel/staffinfo/benefits/.